

00069US1.ST25
SEQUENCE LISTING

<110> Wood, Linda
Vogeli, Gabriel
Karnovsky, Alla
Linske-O'Connell, Lisa I.
Wang, Jun
Liu, Derong

<120> Human Ion Channels

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<151> 2000-03-10

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ttttttcaaa agctaataa gtatttatt ttgtttctgt tcattttat ggcatttagga 240
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aatctctta gtgcagtagg acattaaatt tgctcccctt ttctacttct tgccatcact 420
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<210> 23
<211> 636
<212> DNA
<213> Homo sapiens

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attgagaact aggcaaaaca ttacagagtt accaagttaa ccataaaggg aaaggaatgt 180
agtaatggca aagagaaaaat ccttgagata attactctga attcagaaaa aaaaaaaaaagg 240
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<211> 578

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<212> DNA

<213> Homo sapiens

<400> 24

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gatatttatg	aagtggcat	ccaaatgctg	actccattgt	gcaaaaaaca	gagagtttta	300
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<210> 25

<211> 727

<212> DNA

<213> Homo sapiens

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tgc	atcag	cgcatgctgg	gagg	gggtgggg	atgaaagg	660
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<210> 26

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<211> 721

<212> DNA

<213> Homo sapiens

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ttaatttaat taccatatga ttcagcaatt ttactcttaa gtatataattc aaaagaactg	660
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<210> 27

<211> 680

<212> DNA

<213> Homo sapiens

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ggggtaagg agatgtggcc ctttcctctc tggagcttag agtctgtctc caccattgaa	180
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aacatcggt gacatggctg taatgatcaa ataattaccc gattcttcc gattcggtt	300
taaatgttaa acattcagtg atggtaaca tactcgctga tgtgaaaggg tgggggctga	360
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680

<210> 28
<211> 331
<212> PRT
<213> Homo sapiens

<400> 28

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35 40 45

Gly Gly Gly Gly Thr Thr Thr Ala Gly Ala Cys Ala Gly Gly Ala
50 55 60

Thr Gly Thr Thr Cys Thr Thr Gly Gly Thr Thr Ala Gly Ala
65 70 75 80

Thr Thr Thr Gly Gly Thr Ala Thr Cys Ala Thr Gly Thr Gly Thr Cys
85 90 95

Thr Thr Ala Gly Gly Thr Ala Thr Thr Ala Thr Ala Thr Cys Thr
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Thr Thr Ala Thr Cys Cys Cys Thr Thr Ala Ala Cys Cys Ala Thr Ala
115 120 125

Cys Ala Cys Ala Thr Ala Cys Thr Thr Thr Ala Cys Thr Thr Gly Gly
130 135 140

Gly Gly Thr Ala Ala Cys Cys Thr Thr Ala Gly Thr Ala Ala Ala Thr
145 150 155 160

Ala Ala Gly Ala Thr Cys Thr Cys Ala Ala Thr Thr Ala Ala Gly
165 170 175

Cys Thr Thr Ala Gly Ala Ala Cys Thr Thr Thr Gly Thr Ala Gly Gly
180 185 190

Ala Thr Ala Thr Thr Ala Gly Ala Ala Ala Gly Cys Cys Ala Gly Ala
195 200 205

Gly Thr Cys Cys Ala Thr Ala Thr Cys Thr Gly Thr Thr Thr Gly Thr
210 215 220

Gly Gly Gly Ala Cys Ala Ala Cys Thr Cys Ala Gly Ala Cys Ala
225 230 235 240

Thr Cys Cys Cys Ala Thr Cys Thr Cys Cys Ala Thr Thr Gly Ala
245 250 255

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Cys Thr Ala Thr Ala Thr Thr Thr Gly Ala Gly Thr Gly Ala
 260 265 270

Cys Thr Thr Thr Thr Cys Gly Thr Ala Ala Thr Thr Ala Gly Ala
 275 280 285

Cys Thr Cys Thr Cys Thr Ala Cys Cys Thr Thr Cys Ala Ala Ala Thr
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Thr Cys Ala Gly Cys Thr Thr Cys Thr Gly Thr Gly Gly Ala Thr
 305 310 315 320

Cys Ala Thr Thr Gly Ala Thr Thr Ala Ala Ala
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<210> 29

<211> 610

<212> DNA

<213> Homo sapiens

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tcagggacct tggtgccagcc tccccgccac gtattggtaa gtctaagtca actctggta 180

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cagctacttt 610

<210> 30

<211> 614

<212> DNA

<213> Homo sapiens

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acattgactg ctttagggctt gggcatgagc tgcctttca cctgagcctg agccacaggt 240

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<210> 31
<211> 198
<212> DNA
<213> Homo sapiens

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	tgctggccc	ttgtcagct	gtctccact	gcagcttgcac	agctatgaaa	gcaggagctg	180
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<212> DNA
<213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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 gtgcctgtgc tccctggccc tcttggctcc tgctttagt ctgtcatctg cagtgtggaa 180
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 gctgagcaga agctgatgga cgacccatctg aaca 300
 334

<210> 34
<211> 680
<212> DNA
<213> Homo sapiens
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<211> 619
<212> DNA
<213> Homo sapiens
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<211> 605
<212> DNA
<213> Homo sapiens

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aacct	605

<210> 37
<211> 667
<212> DNA
<213> Homo sapiens

<400> 37

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caatcttgcac tttcctcaaa gcattctcag tggagtggta ggagtaggag tgaggccag	180
aagatttggg gatgagttagt gggctgagat gggaaaacag caagtgtaga aaactcatac	240
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 <212> DNA
 <213> Homo sapiens

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<211> 652
<212> DNA
<213> Homo sapiens

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<211> 680
<212> DNA
<213> Homo sapiens

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gaattttaca agaaggcctc gtattataaa gtttgggtgt tgggttggta gacttgggtt	180
gtggacagtt tgaataaggt tttcatagaa aagcatcagt gaaagaaaaga aaataaaaata	240
tatTTAAAG taactttcct cttccaata aaacttctaa aagtcaatac atatgacttt	300

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ttcaaaaaca taaaaaaaaa tgccagatat agggctttc acccaaagat taaaataagt	360
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<212> DNA
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ataaggaaaa tactatttgc taattttaga aaagagaata tgctaaaagt tacacctcag	240
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gatgaaactg cttagaagat aatgtaaggt tctcacccaa catgagcact gcactcaagg	360
ccattttctag gatgaaaggg tggatgatt atctattatt ccagccatga attatttctg	420
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<211> 585
<212> DNA
<213> Homo sapiens

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gatctgggta ttagccaact ctctgagttg aaggaaacag atgtaaccag gtcatctcat	240
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cttctccctg gctaacagag gactgacatt gactggatta aaggatagag ctaccctgta	360
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<210>	46					
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<213>	Homo sapiens					
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cgcttc	tcggcatg	ggcagcg	gagggcac	tcgcccgg	attgtcata	180
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<211> 446	
<212> DNA	
<213> Homo sapiens	
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<210> 49	
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<213> Homo sapiens	
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<210> 50	
<211> 469	

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<212> DNA
<213> Homo sapiens

<400> 50
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gactgaacgt ccaaataact tttgctgtta catactgtat gacagcggtt ctcaaaccctc 180
tgtgtgcaga acacccctga gaacttggta aaataacggt tcctgagccc cagcccagag 240
cgtatggttc agtagttgg gggtgagggtt ggagaatttg cattttagt aagttcccag 300
gtgataactgc tgctgccact ggtcctggac tacactttga ggagcctgct gaacacagca 360
cctcagcctc tacttgaagg acaaactagc ttcttactgg attcagtggc aagattaagc 420
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<210> 51
<211> 445
<212> DNA
<213> Homo sapiens

<400> 51
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attgtatatt atttggattt atttctctaa ctgaatggac gttttctat atgttgccaa 240
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cttggtaat taatgatggg ttttacatt ttcactttc aaaaaatata atcaccactg 360
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aaaaatctca atattatgtataa 445

<210> 52
<211> 60
<212> PRT
<213> Homo sapiens

<400> 52

Val	Ala	Ile	Arg	Arg	Pro	Ser	Leu	Tyr	Ile	Ile	Asn	Leu	Leu	Val
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Pro	Ser	Ser	Phe	Leu	Val	Ala	Ile	Asp	Ala	Leu	Ser	Phe	Tyr	Leu	Pro

Ala	Glu	Ser	Glu	Asn	Arg	Ala	Pro	Phe	Lys	Ile	Thr	Leu	Leu	Gly

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Tyr Asn Val Phe Leu Leu Met Met Asn Asp Leu Leu
50 55 60

<210> 53
<211> 26
<212> PRT
<213> Homo sapiens

<400> 53

Ser Ala Pro Trp Leu Ser Trp Gly Ile Leu Leu Ile Leu Gly Glu Gly
1 5 10 15

Ser His Ala Pro Thr Ser Phe Tyr Ser Arg
20 25

<210> 54
<211> 22
<212> PRT
<213> Homo sapiens

<400> 54

Arg Thr Val Pro Pro Tyr Leu Tyr Asn Thr Asp Val Trp Phe Phe Phe
1 5 10 15

Ile Arg His Tyr Pro Trp
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<210> 55
<211> 33
<212> PRT
<213> Homo sapiens

<400> 55

Gly Gly Arg Arg Gly Ser Ser Leu Pro Gln Asn Pro Thr Gly Gly Pro
1 5 10 15

Ser Ser Phe Cys Gly His Cys Ile Ser Leu Tyr Ile Leu Pro Pro Gln
20 25 30

Arg

<210> 56
<211> 35
<212> PRT
<213> Homo sapiens

<400> 56

Leu Leu Leu Leu Gly Asn Ser His Tyr Val Tyr Asp Gly Leu Ser Tyr
1 5 10 15

Ser Val Phe Pro Ile Phe Phe His Ile Phe His Phe Leu Tyr Trp Ser
20 25 30

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Pro Phe Ser
35

<210> 57
<211> 37
<212> PRT
<213> Homo sapiens

<400> 57

Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Leu
1 5 10 15

Leu Asn Lys Thr Cys Tyr Asn Asn Leu Asp Pro Pro Ser His Gln Leu
20 25 30

Leu Thr Ala His Leu
35

<210> 58
<211> 52
<212> PRT
<213> Homo sapiens

<400> 58

Asp Glu Arg Asn Gln Val Leu Thr Leu Tyr Leu Trp Ile Arg Gln Glu
1 5 10 15

Trp Thr Asp Ala Tyr Leu Arg Trp Asp Pro Asn Ala Tyr Gly Gly Leu
20 25 30

Asp Ala Ile Arg Ile Pro Ser Ser Leu Val Trp Arg Pro Asp Ile Val
35 40 45

Leu Tyr Asn Lys
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<210> 59
<211> 27
<212> PRT
<213> Homo sapiens

<400> 59

His Phe Val Ala Leu Phe Ser Gln Asp Trp Lys Phe Val Leu Gln Ile
1 5 10 15

Leu Tyr Lys Leu Cys Leu Phe Phe Val Leu Ile
20 25

<210> 60
<211> 40
<212> PRT
<213> Homo sapiens

<400> 60

Leu Met Gln Val Trp Asp Asn Pro Phe Ile Asn Trp Asn Pro Lys Glu

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1	5	10	15
Cys Val Gly Ile Asn Lys Leu Thr Val Leu Ala Glu Asn Leu Trp Leu			
20	25	30	
Pro Asp Ile Phe Ile Val Glu Ser			
35	40		
<210> 61			
<211> 37			
<212> PRT			
<213> Homo sapiens			
<400> 61			
Arg Glu Pro Asn Ser Phe Phe His Asn Gly Ile Asn Ser Thr His Asn			
1	5	10	15
Thr Gly Trp Pro Asn His Leu Leu Lys Val Ser Tyr Leu Asn Thr Phe			
20	25	30	
Thr Met Thr Ile Lys			
35			
<210> 62			
<211> 52			
<212> PRT			
<213> Homo sapiens			
<400> 62			
Thr Leu Ile Glu Cys Ser Met Leu Asn Leu Val Asn Leu Val Leu Asn			
1	5	10	15
Arg His Asp Val Leu Ala Arg Ser Ile Phe Phe Gln Thr Thr Val Trp			
20	25	30	
Thr Ser Ile Thr Ser Glu Lys Gly Glu Leu Pro Leu Val Ala Ser Val			
35	40	45	
Thr Gln Lys Asp			
50			
<210> 63			
<211> 42			
<212> PRT			
<213> Homo sapiens			
<400> 63			
Cys Ile Ser Asp Leu Gly Ile Phe His Tyr Ser Tyr Gln Leu Ser Ile			
1	5	10	15
Ser Asn Pro Glu Asn Pro Lys His Ser Asn Glu His Phe Leu Val Ser			
20	25	30	
His Trp Tyr Ser Lys Asn Phe Arg Phe Trp			
35	40		

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<210> 64
<211> 57
<212> PRT
<213> Homo sapiens

<400> 64

Ser Ser His Val Leu Pro Pro Tyr Phe Pro Leu Leu Gly Ile Leu Pro
1 5 10 15

Arg Pro Ser Phe Phe Thr Arg Pro Val Thr Glu Tyr Thr Leu Met Arg
20 25 30

Pro Lys Pro Phe Leu Asn Ser Asn Ser Lys Ser Met Asp Ser Phe Phe
35 40 45

Leu Phe His Thr Tyr Ser Cys His Ser
50 55

<210> 65
<211> 97
<212> PRT
<213> Homo sapiens

<400> 65

Pro Glu Thr Asn Ile Gly Ser Cys Leu Glu Thr Ser His Ser Ile His
1 5 10 15

Ser Glu Arg Lys Leu Thr Gln Gly Pro Arg Gln Leu Leu Asn Pro Lys
20 25 30

Gln Leu Gln Glu Gly Thr Ile Leu Arg Thr Gln Pro Leu Ser Tyr Cys
35 40 45

Ile Leu Leu Glu Gly Pro Ile Ala Pro Val Ser Ser His Pro Trp Ser
50 . 55 60

Pro Ile Asp Ile Leu His Leu Tyr Ser Pro Pro Gln Leu Ala Leu Leu
65 70 75 80

Pro Arg Pro Lys Cys Lys Pro Leu Ser Val Thr Gln Leu Pro Pro Val
85 90 95

Ala

<210> 66
<211> 21
<212> PRT
<213> Homo sapiens

<400> 66

Pro Ala Arg Arg Ser Glu Arg Val Tyr Glu Cys Cys Lys Glu Pro Tyr
1 5 10 15

Pro Asp Val Thr Phe
20

<210> 67
<211> 85
<212> PRT
<213> Homo sapiens

<400> 67

Asn Ala Pro Ala Ile Thr Arg Ser Ser Cys Arg Val Asp Val Ala Ala
1 5 10 15

Phe Pro Phe Asp Ala Gln His Cys Gly Leu Thr Phe Gly Ser Trp Thr
20 25 30

His Gly Gly His Gln Leu Asp Val Arg Pro Arg Gly Ala Ala Ala Ser
35 40 45

Leu Ala Asp Phe Val Glu Asn Val Glu Trp Arg Val Leu Gly Met Pro
50 55 60

Ala Arg Arg Arg Val Leu Thr Tyr Gly Cys Cys Ser Glu Pro Tyr Pro
65 70 75 80

Asp Val Thr Phe Thr
85

<210> 68
<211> 42
<212> PRT
<213> Homo sapiens

<400> 68

Ser Leu Ser Leu Ala Gly Lys Tyr Tyr Met Ala Thr Met Thr Met Val
1 5 10 15

Thr Phe Ser Thr Ala Leu Thr Ile Leu Ile Met Asn Leu His Tyr Cys
20 25 30

Gly Pro Ser Val Arg Pro Val Pro Ala Trp
35 40

<210> 69
<211> 43
<212> PRT
<213> Homo sapiens

<400> 69

Gly Arg Leu Ala Leu Lys Leu Phe Arg Asp Leu Phe Ala Asn Tyr Thr
1 5 10 15

Ser Ala Leu Arg Pro Val Ala Asp Thr Asp Gln Thr Leu Asn Val Thr
20 25 30

Leu Glu Val Thr Leu Ser Gln Ile Ile Asp Met
35 40

<210> 70

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<211> 31
 <212> PRT
 <213> Homo sapiens

<400> 70

Ala Glu Gly Arg Leu Ala Leu Lys Leu Phe Arg Asp Leu Phe Ala Asn
 1 5 10 15

Tyr Thr Ser Ala Leu Arg Pro Val Ala Asp Thr Asp Gln Thr Leu
 20 25 30

<210> 71
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 71

Gln Ser His Pro Phe Leu Tyr Phe Ser Ile Cys Leu Ile Lys Gln Ser
 1 5 10 15

Ser Phe Val Pro Leu Ser Ile Cys His Pro Ser Val Leu Pro Ser Phe
 20 25 30

Phe Pro Gln Thr Ser Phe Tyr Ile Pro Ala Ser
 35 40

<210> 72
 <211> 69
 <212> PRT
 <213> Homo sapiens

<400> 72

His Tyr Val Tyr Leu Tyr Cys Cys Ala Asn Val Thr Thr Ile His Leu
 1 5 10 15

His Asn Phe Phe His Leu Pro Lys Leu Lys Leu Pro Ile Tyr Thr Ile
 20 25 30

Thr Pro Val Ser Pro Cys Pro Gln Leu Leu Ala Thr Thr Met Leu Pro
 35 40 45

Cys Val Ser Met Asn Leu Ala Thr Leu Ser Thr Tyr Lys Asn His Thr
 50 55 60

Val Phe Val Leu Leu
 65

<210> 73
 <211> 42
 <212> PRT
 <213> Homo sapiens

<400> 73

Phe Ser His Ile Leu Asn Ala Tyr Trp Asn Met Tyr Asn Tyr Ile Trp
 1 5 10 15

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Asn Val Asp Ala Tyr Thr Ser Val Phe Leu Phe Phe Leu Glu Glu Lys
 20 25 30

Val Tyr Phe Pro Pro Leu Ile Cys Val Asn
 35 40

<210> 74
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 74

Glu Thr Asn Tyr Ser Tyr Val Val Ser Ser Leu Pro Ser Ile Phe Phe
 1 5 10 15

Ile Asn Ser Val Ile Ile Pro Cys Leu Leu Phe Phe Ser Glu Phe
 20 25 30

Arg Val Ile Ile Ser Arg Ile Phe Ser Leu Pro
 35 40

<210> 75
 <211> 22
 <212> PRT
 <213> Homo sapiens

<400> 75

Phe Phe Glu Phe Gly Glu Trp Val Leu Glu Thr Val Lys Gly Arg Lys
 1 5 10 15

Tyr Leu Phe Tyr Cys Cys
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<210> 76
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 76

Glu Lys Leu Ser Ala Pro Pro Arg Val Ala Lys Arg Gly Ser Gly Gly
 1 5 10 15

Ala Gly Ile Gly Cys Ala Thr Val Ser Phe Phe Gly Gln Thr Glu His
 20 25 30

Ala Ala Pro Asn Asp Ser Ala Ile Phe Leu Pro Phe Pro Glu Pro Arg
 35 40 45

Ala Val Gln Pro Val Ala Ser Phe Pro Asp
 50 55

<210> 77
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 77

Trp	Gln	Ile	Ser	Leu	Leu	His	Tyr	Cys	Ser	Phe	Pro	Leu	Arg	Gly	Leu
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Tyr	Thr	Tyr	Ser	Ala	Phe	Pro	Cys	Asp	Trp	Gln	His	Cys	Thr	Val	Gly
					20			25					30		
Gly	Ser	Val	Thr	Phe	His	Phe	Ser	Asp	Ile	Gly	Leu	Val	His	Val	Ile
					35			40				45			
Cys	Phe	Gly	Gln	Trp	Asn	Val	Arg	Asp	Thr						
					50			55							

<210> 78

<211> 37
<212> PRT
<213> Homo sapiens

<400> 78

Trp	Ile	Cys	Ser	Glu	Ile	Leu	Tyr	Lys	Cys	Val	Phe	Lys	Ala	Glu	Phe
1				5					10				15		
Leu	Gly	Phe	Asp	Trp	Leu	Gly	Cys	Val	Ile	Cys	Phe	Met	Ser	Met	Ser
				20				25				30			
Tyr	Ser	Thr	Asn	Lys											
				35											

<210> 79

<211> 23
<212> PRT
<213> Homo sapiens

<400> 79

Val	Leu	Asp	Arg	Met	Phe	Leu	Trp	Leu	Asp	Leu	Val	Ser	Cys	Val	Leu
1				5					10				15		
Gly	Ile	Tyr	Ile	Phe	Ile	Pro									
				20											

<210> 80

<211> 54
<212> PRT
<213> Homo sapiens

<400> 80

Gly	Asp	Cys	Arg	Met	Ala	His	Ala	Glu	Gln	Lys	Leu	Met	Asp	Asp	Leu
1				5				10				15			
Leu	Asn	Lys	Thr	Arg	Tyr	Asn	Asn	Leu	Ile	Cys	Pro	Ala	Thr	Ser	Ser
				20				25				30			
Ser	Gln	Leu	Ile	Ser	Ile	Glu	Thr	Glu	Leu	Ser	Leu	Ala	Gln	Cys	Ile
				35				40				45			

Ser Val Val Ser Ala Glu
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<210> 81
<211> 50
<212> PRT
<213> Homo sapiens

<400> 81

Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Leu
1 5 10 15

Leu Asn Lys Thr Cys Tyr Asn Asn Leu Ile Arg Pro Ala Thr Ser Ser
20 25 30

Ser Gln Leu Ile Ser Ile Gln Thr Ala Leu Ser Leu Ala Gln Cys Ile
35 40 45

Ser Val
50

<210> 82
<211> 34
<212> PRT
<213> Homo sapiens

<400> 82

Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Phe
1 5 10 15

Leu Asn Lys Thr Cys Tyr Asn Asn Leu Ile Arg Pro Ala Thr Ser Ser
20 25 30

Ser Gln

<210> 83
<211> 30
<212> PRT
<213> Homo sapiens

<400> 83

Ala Glu Gln Lys Leu Met Asp Asp Leu Leu Asn Lys Thr Arg Tyr His
1 5 10 15

Asn Leu Ile Pro Pro Ser Arg Gln Leu Leu Thr Ala His Leu
20 25 30

<210> 84
<211> 18
<212> PRT
<213> Homo sapiens

<400> 84

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Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Leu
1 5 10 15

Leu Asn

<210> 85
<211> 43
<212> PRT
<213> Homo sapiens

<400> 85

Asn Leu Val Phe Pro Lys Val Tyr Leu Leu Phe Phe Gln Met Ala Ala
1 5 10 15

Phe Phe Leu Cys Pro His Met Gly Phe Ser Leu Cys Ile Cys Ile Leu
20 25 30

Cys Leu Cys Pro Asn Phe Leu Phe Lys Ile Met
35 40

<210> 86
<211> 39
<212> PRT
<213> Homo sapiens

<400> 86

Glu Phe Thr Trp Leu Arg Arg Asn Asp Ser Val His Gly Leu Glu Thr
1 5 10 15

Leu Trp Leu Ala Tyr Thr Ile Gln Trp Tyr Phe Thr Leu Asp Thr Arg
20 25 30

Leu Gln Gln Glu Thr Gly Asn
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<210> 87
<211> 54
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (33)..(43)
<223> Xaa is any amino acid

<400> 87

Gly Leu Thr Ser Met Leu Ile Leu Thr Thr Ile Asp Ser His Leu Arg
1 5 10 15

Asp Lys Leu Pro Asn Ile Ser Cys Ile Lys Ala Ile Asp Ile Tyr Ile
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Glu Tyr Val Tyr
35 40 45

Ile Asn Tyr Leu Phe Tyr
50

<210> 88
<211> 42
<212> PRT
<213> Homo sapiens

<400> 88

Leu Ser Phe Ile Ser Glu Thr Lys Gln Lys Pro Leu Asn Gly Trp Phe
1 5 10 15

Leu Asn Ile Leu Pro Gln Thr Phe Pro Leu Thr Cys Ile Arg Ile His
20 25 30

Phe Gly Gly Pro Pro Leu Cys Leu Gly Met
35 40

<210> 89
<211> 43
<212> PRT
<213> Homo sapiens

<400> 89

Leu Phe Leu Phe Val Ser Phe Leu Phe Leu Gln Pro Leu Met Glu Tyr
1 5 10 15

Gly Thr Leu His Tyr Phe Thr Ser Asn Gln Lys Gly Lys Thr Ala Thr
20 25 30

Lys Asp Arg Lys Leu Lys Asn Lys Ala Ser Val
35 40

<210> 90
<211> 94
<212> PRT
<213> Homo sapiens

<400> 90

Leu Ala Ser Trp Pro Pro Val Asp His Phe Cys Arg Gln Asp Ser Gln
1 5 10 15

Lys Gly Asn His Ser Leu Asn Phe Tyr Arg Ile Ile Phe Tyr Leu Lys
20 25 30

Arg His Val His Lys Trp Gln Asp Ala Gln His Thr Ser Phe Tyr Cys
35 40 45

Val Ser Leu Tyr Cys Thr Ser Gln Ile Leu His Phe Leu Thr Asn Gly
50 55 60

Arg Phe Leu Ala Thr Leu Cys Gln Ala Asn Leu Ser Val Pro Phe Val
65 70 75 80

Gln Gln His Ala Leu Pro Ser Cys Leu Trp Val Thr Phe Trp

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85

90

<210> 91
<211> 44
<212> PRT
<213> Homo sapiens

<400> 91

Arg Val Asp Gln Asp Gly His Val Lys Leu Asn Leu Ala Leu Thr Thr
1 5 10 15

Glu Thr Asn Cys Asn Phe Glu Leu Leu His Phe Pro Arg Asp His Ser
20 25 30

Asn Cys Ser Leu Ser Phe Tyr Ala Leu Ser Asn Thr
35 40

<210> 92
<211> 44
<212> PRT
<213> Homo sapiens

<400> 92

Arg Val Asp Gln Asp Gly His Val Lys Leu Asn Leu Ala Leu Thr Thr
1 5 10 15

Glu Thr Asn Cys Asn Phe Glu Leu Leu His Phe Pro Arg Asp His Ser
20 25 30

Asn Cys Ser Leu Ser Phe Tyr Ala Leu Ser Asn Thr
35 40

<210> 93
<211> 59
<212> PRT
<213> Homo sapiens

<400> 93

Leu Glu Phe Ser Pro Ile Phe Tyr Cys Leu Arg Leu Ser Ser Phe Leu
1 5 10 15

Trp Leu Ala Tyr Arg Leu Ser Pro Gln Pro Gly Tyr Leu Asp Phe Leu
20 25 30

Glu Phe Ser Pro Ile Phe Tyr Phe Leu Ser Leu Ser Cys Phe Leu Trp
35 40 45

Leu Ala Tyr Arg Leu Ser Pro Gln Pro Gly Tyr
50 55

<210> 94
<211> 38
<212> PRT
<213> Homo sapiens

<400> 94

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Phe Asn Phe Pro Pro Phe Asn Leu Val Cys Phe Thr Pro His Cys Leu
 1 5 10 15

Leu Arg Ile Asp Val Cys Thr Gln Leu Phe Leu Trp Thr Gln Pro Thr
 20 25 30

Leu Ser Leu His Ile Leu
 35

<210> 95
 <211> 46
 <212> PRT
 <213> Homo sapiens

<400> 95

Ala Ser Arg Arg Cys Asn Ile Val Ala Met Cys Pro Glu Ser Val Pro
 1 5 10 15

Ser Gly Gly Phe Leu Val Ser Leu Thr Ser Arg Met Lys Pro Trp Thr
 20 25 30

Leu Thr Val Ser Val Ala Val Leu Lys Asp Gly Val Ser Gly
 35 40 45

<210> 96
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 96

Gly Ala Ile Leu Thr Asn Glu Thr Trp Glu Lys Leu Ala Gly Glu Leu
 1 5 10 15

Val Gly Tyr Phe Pro Phe Ala Leu Lys Gly Ala Lys Glu Arg Tyr Ile
 20 25 30

Pro Phe Phe Phe Pro Phe Ser Ser Leu Asp Val
 35 40

<210> 97
 <211> 164
 <212> PRT
 <213> Homo sapiens

<400> 97

Lys Arg Glu Cys His Gln Arg Arg Pro Lys Glu Gln Ile Leu Thr Leu
 1 5 10 15

Gln Glu Lys Leu Trp Ala Arg Gln Lys Glu Lys Asp Gln Leu Phe Leu
 20 25 30

Gln Leu Lys Lys Val Ser Met Arg Lys Lys Asn Gly Gly Glu Arg Ser
 35 40 45

Arg Ala Thr Pro Ser Asp Ile Arg Cys Glu Pro Ala Glu Pro Asp Tyr

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50

55

60

Ser Arg Gly Asp Ser Leu Pro Pro Arg His Ala Gly Ser Ala Gly Gly
 65 70 75 80

His Asp Arg Pro Gly Ile Val Ile Ala Ala Asp Pro Ala Lys Gln Met
 85 90 95

Phe Arg Pro His Val Leu Thr Thr Arg Lys Ser Val Gly Ser Ala Ala
 100 105 110

Ala Phe Ala Gly Thr Pro Glu Gln Ala Ala Trp Ala Val Pro Leu Gly
 115 120 125

Leu Leu Ser Pro Tyr Leu Asn Met Gly Pro His Ser Pro Met Ala Leu
 130 135 140

Val Gly Ser Ser Glu Gln Phe Ser Ala Pro Trp Gly Ala Phe Met Ser
 145 150 155 160

Gln Pro Gln Pro

<210> 98

<211> 104

<212> PRT

<213> Homo sapiens

<400> 98

Gly Ser Ala Gly Gly His Asp Arg Pro Gly Ile Val Ile Ala Ala Asp
 1 5 10 15

Pro Ala Lys Gln Met Phe Arg Pro His Val Leu Thr Thr Arg Lys Ser
 20 25 30

Val Gly Ser Ala Ala Ala Phe Ala Gly Thr Pro Glu Gln Ala Ala Trp
 35 40 45

Ala Val Pro Leu Gly Leu Leu Ser Pro Tyr Leu Asn Met Gly Pro His
 50 55 60

Ser Pro Met Ala Leu Val Gly Ser Ser Glu Gln Phe Ser Ala Pro Trp
 65 70 75 80

Gly Ala Phe Met Ser Gln Pro Gln Pro Tyr Val Leu Leu Gly His Phe
 85 90 95

Gln His Thr Gln Thr Gly Phe Leu
 100

<210> 99

<211> 62

<212> PRT

<213> Homo sapiens

<400> 99

Cys Ile Glu Ala Pro Phe His Leu His Thr Arg Val Cys Ile Ser Phe

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1 5 10 15
Leu Pro Ser Phe Ile His Tyr Leu Leu Ile Phe Val Tyr Leu Phe
20 25 30

Ser Phe Leu Leu Gly Pro Ala Arg Leu Val Phe Cys Leu Cys Ala Leu
35 40 45

Val Thr Ser Ala Ser Gln Ile Ala Gly Thr Thr Gly Asp Leu
50 55 60

<210> 100

<211> 94

<212> PRT

<213> Homo sapiens

<400> 100

Gln Glu Glu Asp Ile Ile Gln Glu Ser Arg Phe Tyr Phe Arg Gly Tyr
1 5 10 15

Gly Leu Gly His Cys Leu Gln Ala Arg Asp Gly Gly Pro Met Glu Gly
20 25 30

Ser Gly Ile Tyr Ser Pro Gln Pro Pro Ala Pro Leu Leu Arg Glu Gly
35 40 45

Glu Thr Thr Arg Lys Leu Tyr Val Asp Ala Lys Arg Ile Asp Thr Ile
50 55 60

Ser Arg Ala Val Phe Pro Phe Thr Phe Leu Ile Phe Asn Ile Phe Tyr
65 70 75 80

Trp Val Val Tyr Lys Val Leu Arg Ser Glu Asp Ile His Gln
85 90

<210> 101

<211> 43

<212> PRT

<213> Homo sapiens

<400> 101

Glu Asn Arg Cys His Thr Val Cys Asn Ser Lys Ser Asp Leu Asp Val
1 5 10 15

Gln Ser Ser Gly Ser Phe Pro Lys Ala Phe His Val Trp Leu Pro Ser
20 25 30

Cys Ser Gly Asn Thr Ser Gln Val Asp Gly Gly
35 40

<210> 102

<211> 71

<212> PRT

<213> Homo sapiens

<400> 102

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Ala Ile Lys Pro Ser Leu Gly Val Trp Ser Val Ser Glu Val Tyr Ser
 1 5 10 15

His Cys Lys Trp Ile Leu Thr Val Met Val Asn Thr Pro Gly Gln Arg
 20 25 30

Met Gly His Ala His Ser Tyr Trp Lys Asp Leu Glu His Phe Pro Val
 35 40 45

Asn Cys Ile Leu Phe Gly Phe Ile Ser Leu Thr Glu Trp Thr Phe Phe
 50 55 60

Tyr Met Leu Pro Asn Leu Pro
 65 70

<210> 103

<211> 1779

<212> DNA

<213> Homo sapiens

<400> 103

tggtaccggt ccggaattcc cgggatcacg ccctgccttg gggccctct catataggga 60

gcacagggtt gctctccttc atctcacaca ttcgatgtcc actacaggaa gggcgttac 120

tttcaccatc aattgctca ggtttggcca gcacggggcg gatcccactg ctctgaattc 180

agtgttaat agaaagccct tccgtccggt caccaacatc agcgtccccca cccaaagtcaa 240

catctccttc gcgatgtctg ccacccctaga tgtgaatgaa cagctgcacc tcttgtcatc 300

attcctgtgg ctggaaatgg tttggataa cccatttatc agctggaacc cagaggaatg 360

tgagggcatc acgaagatga gtatggcagc caagaacctg tggctcccag acatttcat 420

cattgaactc atggatgtgg ataagacccc aaaaggcctc acagcatatg taagtaatga 480

aggtcgcattc aggtataaga aacccatgaa ggtggacagt atctgttaacc tggacatctt 540

ctacttcccc ttgcaccaggc agaactgcac actcaccttc agtcattcc tctacacagt 600

ggacagcatg ttgctggaca tggagaaaga agtgtggaa ataacagacg catccggaa 660

catccttcag acccatggag aatggagct cctggcctc agcaaggcca cggcaaagtt 720

gtccaggggg ggcacacctgt atgatcatc cgtgttctat gtggccatca ggccgcaggcc 780

cagcctctat gtcataaacc ttctcgtgcc cagtggcttt ctgggtgcca tcgatgccct 840

cagcttctac ctgccagtga aaagtggaa tcgtgtccca ttcaagataa cgctcctgct 900

gggctacaac gtcttcctgc tcatgtgag tgacttgctc cccaccaggc gcacccccc 960

catcggtgtc tacttcgtccc tgtgcctgtc cctgatggtg ggcagcctgc tggagaccat 1020

cttcatcacc cacctgctgc acgtggccac cacccagccc ccacccctgc ctgcgtggct 1080

ccactccctg ctgctccact gcaacagccc ggggagatgc tgtcccactg cgccccagaa 1140

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ggaaaataag	ggcccggtc	tcaccccac	ccacctgcc	ggtgtgaagg	agccagaggt	1200
atcagcaggg	cagatgccgg	gccctgcgga	ggcagagctg	acagggggct	cagaatggac	1260
aaggcccag	cggAACACG	aggcccagaa	gcagcactca	gtggagctgt	ggttgcagtt	1320
cagccacgctg	atggacgcca	tgctcttccg	cctctacctg	ctttcatgg	cctcctctat	1380
catcaccgtc	atatgcctct	ggaacaccta	ggcaggtgct	cactgccaa	ttcagtctg	1440
gagttctct	tgcctccagg	gactggccag	gtctcccccc	tttcctgagt	accaactatc	1500
atatccccaa	agatgactga	gtctctgctg	tattccatgt	atccaatcc	ggtcctgctg	1560
atcaattcca	atcccagaca	tttctccctg	ttcctgcatt	ttgttggctt	cttcagtcc	1620
taccatatgg	ttcttaggtcc	ctcttacgtc	atctgcata	cagactatac	ctcttctgccc	1680
cgctgacttg	cccaataaaat	aattctgcag	agaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	1740
aaaaaaaaaa	aaaaaaaaaa	aaaaaaggc	ggccgctct			1779

<210> 104
 <211> 999
 <212> DNA
 <213> Homo sapiens

<400> 104	60					
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atgtctgcca	tccttagatgt	aatgaacag	ctgcacccct	tgtcatcatt	cctgtggctg	120
gaaatggttt	gggataacco	atttatcagc	tggAACCCAG	aggaatgtga	ggccatc	180
aagatgagta	tggcagccaa	gaacctgtgg	ctcccagaca	ttttcatcat	tgaactcatg	240
gatgtggata	agacccaaa	aggcctcaca	gcataatgtaa	gtaatgaagg	tcgcata	300
tataagaaac	ccatgaaggt	ggacagtatac	tgtaacctgg	acatttcta	cttcccattc	360
gaccagcaga	actgcacact	cacccatc	tcattcctct	acacagtgg	cagcatgtt	420
ctggacatgg	agaaagaagt	gtggaaata	acagacgcat	cccgaaacat	cttcagacc	480
catggagaat	gggagctcct	gggcctc	aaggccaccc	caaagtgtc	caggggaggc	540
aacctgtatg	atcagatcgt	gttctatgt	gccatcaggc	gcaggcccag	cctctatgtc	600
ataaaccttc	tctgtccccag	tggcttctg	gttgccatcg	atgcctcag	tttctacctg	660
ccagtgaaaa	gtggaaatcg	tgtccattc	aagataacgc	tcctgctgg	ctacaacgtc	720
ttcctgctca	tgtgagtga	cttgctcccc	accagtggca	ccccctcat	cggtgtctac	780
ttcgcctgt	gcctgtccct	gatggggc	agcctgctgg	agaccatctt	catcacccac	840
ctgctgcacg	tggccaccac	ccagccccca	ccccctgc	ggtggtcca	ctccctgctg	900

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ctccactgca acagccccggg gagatgtgt cccactgcgc cccagaagga aaataagggc 960
ccgggtctca ccccccaccca cctgccccgt gaggtgtga 999

<210> 105
<211> 586
<212> PRT
<213> Homo sapiens

<400> 105

Gly Thr Gly Pro Glu Phe Pro Gly Ser Arg Pro Ala Leu Gly Pro Leu
1 5 10 15

Ser Tyr Arg Glu His Arg Val Ala Leu Leu His Leu Thr His Ser Met
20 25 30

Ser Thr Thr Gly Arg Gly Val Thr Phe Thr Ile Asn Cys Ser Gly Phe
35 40 45

Gly Gln His Gly Ala Asp Pro Thr Ala Leu Asn Ser Val Phe Asn Arg
50 55 60

Lys Pro Phe Arg Pro Val Thr Asn Ile Ser Val Pro Thr Gln Val Asn
65 70 75 80

Ile Ser Phe Ala Met Ser Ala Ile Leu Asp Val Asn Glu Gln Leu His
85 90 95

Leu Leu Ser Ser Phe Leu Trp Leu Glu Met Val Trp Asp Asn Pro Phe
100 105 110

Ile Ser Trp Asn Pro Glu Glu Cys Glu Gly Ile Thr Lys Met Ser Met
115 120 125

Ala Ala Lys Asn Leu Trp Leu Pro Asp Ile Phe Ile Ile Glu Leu Met
130 135 140

Asp Val Asp Lys Thr Pro Lys Gly Leu Thr Ala Tyr Val Ser Asn Glu
145 150 155 160

Gly Arg Ile Arg Tyr Lys Lys Pro Met Lys Val Asp Ser Ile Cys Asn
165 170 175

Leu Asp Ile Phe Tyr Phe Pro Phe Asp Gln Gln Asn Cys Thr Leu Thr
180 185 190

Phe Ser Ser Phe Leu Tyr Thr Val Asp Ser Met Leu Leu Asp Met Glu
195 200 205

Lys Glu Val Trp Glu Ile Thr Asp Ala Ser Arg Asn Ile Leu Gln Thr
210 215 220

His Gly Glu Trp Glu Leu Leu Gly Leu Ser Lys Ala Thr Ala Lys Leu
225 230 235 240

Ser Arg Gly Gly Asn Leu Tyr Asp Gln Ile Val Phe Tyr Val Ala Ile
245 250 255

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Arg Arg Arg Pro Ser Leu Tyr Val Ile Asn Leu Leu Val Pro Ser Gly
 260 265 270

Phe Leu Val Ala Ile Asp Ala Leu Ser Phe Tyr Leu Pro Val Lys Ser
 275 280 285

Gly Asn Arg Val Pro Phe Lys Ile Thr Leu Leu Leu Gly Tyr Asn Val
 290 295 300

Phe Leu Leu Met Met Ser Asp Leu Leu Pro Thr Ser Gly Thr Pro Leu
 305 310 315 320

Ile Gly Val Tyr Phe Ala Leu Cys Leu Ser Leu Met Val Gly Ser Leu
 325 330 335

Leu Glu Thr Ile Phe Ile Thr His Leu Leu His Val Ala Thr Thr Gln
 340 345 350

Pro Pro Pro Leu Pro Arg Trp Leu His Ser Leu Leu His Cys Asn
 355 360 365

Ser Pro Gly Arg Cys Cys Pro Thr Ala Pro Gln Lys Glu Asn Lys Gly
 370 375 380

Pro Gly Leu Thr Pro Thr His Leu Pro Gly Val Lys Glu Pro Glu Val
 385 390 395 400

Ser Ala Gly Gln Met Pro Gly Pro Ala Glu Ala Glu Leu Thr Gly Gly
 405 410 415

Ser Glu Trp Thr Arg Ala Gln Arg Glu His Glu Ala Gln Lys Gln His
 420 425 430

Ser Val Glu Leu Trp Leu Gln Phe Ser His Ala Met Asp Ala Met Leu
 435 440 445

Phe Arg Leu Tyr Leu Leu Phe Met Ala Ser Ser Ile Ile Thr Val Ile
 450 455 460

Cys Leu Trp Asn Thr Ala Gly Ala His Leu Pro Thr Ser Val Trp Ser
 465 470 475 480

Phe Ser Cys Leu Gln Gly Leu Ala Arg Ser Pro Pro Phe Pro Glu Tyr
 485 490 495

Gln Leu Ser Tyr Pro Gln Arg Leu Ser Leu Cys Cys Ile Pro Cys Ile
 500 505 510

Pro Ile Arg Ser Cys Ser Ile Pro Ile Pro Asp Ile Ser Pro Cys Ser
 515 520 525

Cys Ile Leu Leu Ala Ser Phe Ser Pro Thr Ile Trp Phe Val Pro Leu
 530 535 540

Thr Ser Ser Ala Gln Thr Ile Pro Leu Leu Pro Ala Asp Leu Pro Asn
 545 550 555 560

Lys Phe Cys Arg Glu Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys

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565

570

575

Lys Lys Lys Lys Lys Arg Ala Ala Ala
580 585

<210> 106

<211> 332

<212> PRT

<213> Homo sapiens

<400> 106

Gly Ile Pro Gly Met Val Thr Asn Ile Ser Val Pro Thr Gln Val Asn
1 5 10 15

Ile Ser Phe Ala Met Ser Ala Ile Leu Asp Val Asn Glu Gln Leu His
20 25 30

Leu Leu Ser Ser Phe Leu Trp Leu Glu Met Val Trp Asp Asn Pro Phe
35 40 45

Ile Ser Trp Asn Pro Glu Glu Cys Gly Ile Thr Lys Met Ser Met
50 55 60

Ala Ala Lys Asn Leu Trp Leu Pro Asp Ile Phe Ile Ile Glu Leu Met
65 70 75 80

Asp Val Asp Lys Thr Pro Lys Gly Leu Thr Ala Tyr Val Ser Asn Glu
85 90 95

Gly Arg Ile Arg Tyr Lys Lys Pro Met Lys Val Asp Ser Ile Cys Asn
100 105 110

Leu Asp Ile Phe Tyr Phe Pro Phe Asp Gln Gln Asn Cys Thr Leu Thr
115 120 125

Phe Ser Ser Phe Leu Tyr Thr Val Asp Ser Met Leu Leu Asp Met Glu
130 135 140

Lys Glu Val Trp Glu Ile Thr Asp Ala Ser Arg Asn Ile Leu Gln Thr
145 150 155 160

His Gly Glu Trp Glu Leu Leu Gly Leu Ser Lys Ala Thr Ala Lys Leu
165 170 175

Ser Arg Gly Gly Asn Leu Tyr Asp Gln Ile Val Phe Tyr Val Ala Ile
180 185 190

Arg Arg Arg Pro Ser Leu Tyr Val Ile Asn Leu Leu Val Pro Ser Gly
195 200 205

Phe Leu Val Ala Ile Asp Ala Leu Ser Phe Tyr Leu Pro Val Lys Ser
210 215 220

Gly Asn Arg Val Pro Phe Lys Ile Thr Leu Leu Leu Gly Tyr Asn Val
225 230 235 240

Phe Leu Leu Met Met Ser Asp Leu Leu Pro Thr Ser Gly Thr Pro Leu
245 250 255

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Ile Gly Val Tyr Phe Ala Leu Cys Leu Ser Leu Met Val Gly Ser Leu
 260 265 270

Leu Glu Thr Ile Phe Ile Thr His Leu Leu His Val Ala Thr Thr Gln
 275 280 285

Pro Pro Pro Leu Pro Arg Trp Leu His Ser Leu Leu Leu His Cys Asn
 290 295 300

Ser Pro Gly Arg Cys Cys Pro Thr Ala Pro Gln Lys Glu Asn Lys Gly
 305 310 315 320

Pro Gly Leu Thr Pro Thr His Leu Pro Gly Glu Val
 325 330

<210> 107

<211> 485

<212> DNA

<213> Homo sapiens

<400> 107

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gcctcggttt cccgctgggc ccttgcgtccat tctgagcccc ctgtcagctc tgcctccgca 120

ggggccggca tctgccctgc tgataacctct ggctccttca cacctacaga aagacagaga 180

ctcagccatg ggctgcaaatt gtcacccgtg gagggaggga gacaggaaag gaggcaggag 240

cagagaagtg gaggtgggggg aagaggaatg tgacttccct caccggcag gtgggtgggg 300

ggtgagaccc gggcccttat tttccttctg gggcgcagtg ggacagcatc tccccgggct 360

gttgcagtgg agcagcaggag agtggagcca ccgaggcagg ggtggggct gggtgtggc 420

cacgtgcagc aggtgggtga tgaagatggt ctccagcagg ctgcccacca tcagggacag 480

gcaca 485

<210> 108

<211> 584

<212> DNA

<213> Homo sapiens

<400> 108

cccaagcactt tgggaggcca aggtgggtgg atcacttcag ttcaggagtt tgagaccagc 60

ctggggcaaca tggtaaaacc tcatactctta aaaaaaaaaa aaaaaaaaaa attagccagg 120

cctgggtggc cgcctgttagt cccagctact tgggaggctg aggctgagac aggaggatca 180

ttttagggcca ggacatggaa gttgcagtga gctgagagca tgccactcta ctccagcctg 240

ggtgacagag caagatcctg tctcaaaaaa aaaaaaaaaa aaaaaggaga gagagaaact 300

gcggcccccctg cctcttgcgt tatctctcct ccagcatgga tgtggataaa accccaaaaag 360

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gcctcacagc atatgttaagt aatgaaggc gcatcaggta taaaaaaccc atgaaggggg	420
acagtatctg taacctggac atcttctact tccccttcga ccagcaaaac tgcacactca	480
ccttcagctc attcctctac acaggttaagt tgcagtgagg tctcagggat ggggtgaatg	540
agagcaacca acaaatttaa agaaactatg agtaaatggc gacc	584

<210> 109

<211> 38

<212> PRT

<213> Homo sapiens

<400> 109

Cys Leu Ser Leu Met Val Gly Ser Leu Leu Glu Thr Ile Phe Ile Thr			
1	5	10	15

His Leu Leu His Val Ala Thr Thr Gln Pro Pro Pro Leu Pro Arg Trp		
20	25	30

Leu His Ser Leu Leu Leu	
35	

<210> 110

<211> 60

<212> PRT

<213> Homo sapiens

<400> 110

Leu Ser Ser Ser Met Asp Val Asp Lys Thr Pro Lys Gly Leu Thr Ala			
1	5	10	15

Tyr Val Ser Asn Glu Gly Arg Ile Arg Tyr Lys Lys Pro Met Lys Gly		
20	25	30

Asp Ser Ile Cys Asn Leu Asp Ile Phe Tyr Phe Pro Phe Asp Gln Gln		
35	40	45

Asn Cys Thr Leu Thr Phe Ser Ser Phe Leu Tyr Thr		
50	55	60

<210> 111

<211> 30

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 111

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<210> 112

<211> 22

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 112

cccagcctct atgtcataaa cc

22

<210> 113

<211> 20

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 113

tcatgagcag gaagacgttg

20

<210> 114

<211> 19

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 114

gccatcaggc gcaggccaa

19

<210> 115

<211> 23

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 115

caagtcattc atcatgagca gga

23

<210> 116

<211> 20

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 116

tgcctgtccc tcatgggtggg

20

<210> 117

<211> 19

00069US1.ST25

<212> DNA
<213> Artificial

<220>
<223> Probe/Primer

<400> 117
gagcagcagg gagtggagc

19